TESIS

PERBANDINGAN EFEK PEMANASAN AKTIF DAN PEMANASAN PASIF TERHADAP KADAR GLUKOSA DARAH DAN KADAR ASAM LAKTAT PADA AKTIVITAS FISIK SUBMAKSIMAL

(PENELITIAN EKSPERIMENTAL LABORATORIS)

AMINUDDIN

PROGRAM STUDI ILMU KESEHATAN OLAHRAGA
JENJANG MAGISTER (S2) FAKULTAS KEDOKTERAN
UNIVERSITAS AIRLANGGA
2014

Lembar Pengesahan

TESIS INI TELAH DISETUJUI UNTUK DIUJI
Pada Tanggal, ...Agustus 2014

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ABSTRACT

COMPARATIVE EFECT OF ACTIVE WARMING UP AND PASSIVE WARMING UP THROUGH BLOOD GLUCOSE LEVEL AND LACTIC ACID TO SUB-MAXIMAL PHYSICAL ACTIVITY

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Warming up is a beginning activity in exercise to prepare body physiologically and psychologically to do more heavy activity and reduce flawed risk before doing exercise or competition.

Research design is *"the randomized pretest- posttest control group design"*. This research uses human beings as subject. The subjects are students of Surabaya State University of sport faculty major of physical education. Samples of this research are eighteen students of 21- 23 years old. The students are divided into two groups. Nine students are in active warming up Group (K1) and nine students are in passive warming up Group (K2). Each group is given sub-maximal physical activity by paddling ergocycle by 80% HRmax. The measurement of blood glucose and lactic acid was done four times: Pre-test, immediately after warming up, 5 minutes and 30 minutes after sub-maximal physical activity

Research finding is analyzed by descriptive analysis, test of normality, paired t test, and independent t test in significance 0,05 by IBM SPSS 20. The results showed the blood glucose (mg/dL); K1: 99,66±2,73-96,66±2,64-92,55±2,18-89,88±3,44. K2: 96,88±3,01-99,22±2,22-93,55±3,24-91,11±5,55. The blood lactic acid (mmol/dL); K1: 2,78±0,41-7,41±1,41-8,82±1,50-3,40 ±0,49. K2: 1,33±0,41-2,07±0,65-6,30±1,39-3,10 ±0,66.

Therefore, it can be concluded that: There is no difference between K1 to K2 to changes in blood glucose, only an increase in blood glucose after passive warming up. Increased blood lactate after warming up in group K1 is greater than K2.

Keyword : Active warming up, passive warming up, blood glucose, blood lactid acid and sub-maximal physical activity